Whole Genome Sequencing for Cancer

Cancer is a complex, heterogeneous genetic disease caused by some cancer driver mutation which is located not only in exon region but non-coding region. Hence, whole-genome sequencing (WGS) of cancer is a powerful tool for detecting and analyzing the entire DNA make-up of cancer tissue in single run. It allows rapid and deep capture of a large number of cancer-related variations including single nucleotide variants, small insertion/deletions, and copy number variants. By comparing tumor with normal DNA, the unique DNA mutations present in cancer tissue are discovered, which may provide key information for genetic mechanism and pathogenesis of cancer, and provide a basis for disease diagnosis.

Features

1) Rapid, detailed, and accurate analysis for the whole genome of an individual.
2) Deeply capture all diseases causing genetic variations.

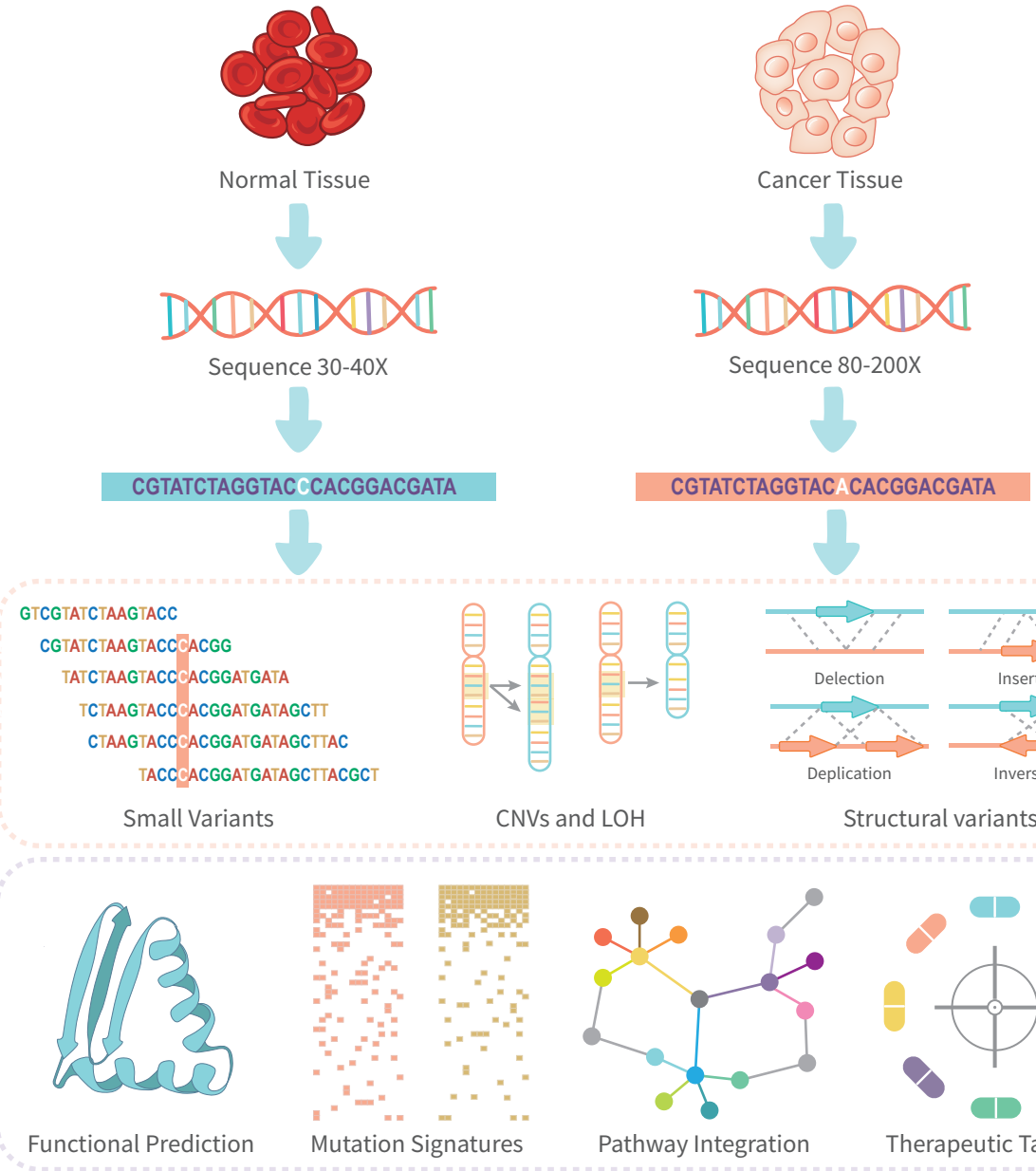
Cancer genomics analysis

1) General analysis
a. Quality control for eliminating low-quality data statistical sequencing depth and coverage.
b. Detection and annotation of somatic
c. SNP/InDel/SV/CNV
d. Detection and analysis for risk genes and driver genes

2) Advanced analysis
a. MRT high frequency mutation gene correlation analysis
b. OncodriveCLUST driver genes prediction
c. Fusion gene detection and Circos diagram
d. High frequency CNV analysis
e. Tumor typing analysis

Creative Biolabs Whole Genome Sequencing Service for Cancer

1 WGS WorkFlow



2 Applications

- Obtain high-quality assembly of complex genomes
- Identify change of genetic predisposition
- Identify unknown genes to expore the disease state
- Detect all types of somatic/germline
- Precise treatment of tumors
- Capture both large and small variants

What we do:

- Whole Exome Sequencing (WES) Service
- Target Sequencing Service
- Whole Transcriptome Sequencing (WTS) Service
- Immune Repertoire Sequencing Service

Features:

- Up to 99.99% Accuracy
- Identify Potential Causative Variants
- Detect DNA Modifications without Bisulfite Treatment
- Identify Large Structural Variants
- Phase Alleles and Ariants

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